What is claimed is:

1. A charging device comprising:

a charge roller formed with annular grooves at opposite end portions thereof and configured to charge an image carrier; and

annular gap forming members each being fitted in a particular one of said annular grooves for forming a gap between said charge roller and the image carrier;

wherein said gap forming members each have an area of 1.0×10^{-6} m^2 to 3.0×10^{-6} m^2 in a section containing an axis of said charge roller.

2. The charging device as claimed in claim 1, wherein said gap forming members are formed of a thermally shrinkable material.

3. The charging device as claimed in claim 1, wherein a ratio of a width of each of said gap forming members in an axial direction of said charge roller to a thickness is between 25 and 100.

4. The charging device as claimed in claim 1, wherein said charge roller comprises a resin layer.

5. The charging device as claimed in claim 4, wherein said resin layer contains an ion-conductive substance.

6. The charging device as claimed in claim 4, wherein a ratio of a thickness of said resin layer to a thickness of an individual gap forming member is between 5 and 20.

7. The charging device as claimed in claim 1, wherein said gap forming members are formed of a fluorine-based resin.

8. The charging device as claimed in claim 7, wherein the fluorine-based resin is insulative.

9. The charging device as claimed in claim 1, further comprising voltage applying means for applying to the image carrier via said charge roller a voltage made up of a DC voltage and an AC voltage superposed on said DC voltage and having a peak-to-peak voltage that is two times or more higher than a discharge start voltage between said charge roller and said image carrier.

10. An image forming apparatus comprising:

an image carrier; and

a charging device configured to charge said image carrier;

said charging device comprising:

a charge roller formed with annular grooves at opposite end portions thereof and configured to charge said image carrier; and

annular gap forming members each being fitted in a particular one of said annular grooves for forming a gap between said charge roller and said image carrier;

wherein said gap forming members each have an area of 1.0×10^{-6} m^2 to 3.0×10^{-6} m^2 in a section containing an

axis of said charge roller.

11. The apparatus as claimed in claim 10, wherein the gap is 100 μm or less between a portion of said charge roller delimited by said annular grooves and corresponding to an image forming range of said image carrier and said image carrier.

12. The apparatus as claimed in claim 10, further comprising a cleaning member having a length great enough to contact at least both of said gap forming members in the axial direction and configured to clean said charge roller and said gap forming members.

13. The apparatus as claimed in claim 10, wherein at least said charging device and said image carrier are constructed into a single unit removaly mounted to a body of said apparatus.

14. A charging device comprising:

a charge roller formed with annular grooves at opposite end portions thereof and configured to charge an image carrier; and

annular gap forming members each being fitted in a particular one of said annular grooves for forming a gap between said charge roller and the image carrier;

wherein said annular grooves each are deeper at opposite end portions in an axial direction of said charge roller than at a center portion.

15. The charging device as claimed in claim 14, wherein said annular grooves each comprise a first portion positioned at a center in the axial direction and second portions positioned at opposite ends and deeper than said first portion.

16. The apparatus as claimed in claim 14, wherein said charge roller comprises a first portion delimited by said annular grooves in the axial direction and corresponding to an image forming range of the image carrier and second portions closer to opposite ends of said charge roller than said annular grooves and corresponding to non-image forming ranges of said image carrier, and

a diameter of said charge roller is smaller in said second portions than said first portion.

17. The charging device as claimed in claim 14, wherein said charge roller comprises a resin layer.

18. The charging device as claimed in claim 17, wherein said resin layer contains an ion-conductive substance.

19. The charging device as claimed in claim 14, wherein said gap forming members are formed of a fluorine-based resin.

20. The charging device as claimed in claim 19, wherein the fluorine-based resin is insulative.

21. The charging device as claimed in claim 14,

further comprising voltage applying means for applying to the image carrier via said charge roller a voltage made up of a DC voltage and an AC voltage superposed on said DC voltage and having a peak-to-peak voltage that is two times or more higher than a discharge start voltage between said charge roller and said image carrier.

22. An image forming apparatus comprising:

an image carrier; and

a charging device configured to charge said image carrier;

said charging device comprising:

a charge roller formed with annular grooves at opposite end portions thereof and configured to charge said image carrier; and

annular gap forming members each being fitted in a particular one of said annular grooves for forming a gap between said charge roller and said image carrier;

wherein said annular grooves each are deeper at opposite end portions in an axial direction of said charge roller than at a center portion.

23. The apparatus as claimed in claim 22, wherein the gap is 100 μm or less between a portion of said charge roller delimited by said annular grooves and corresponding to an image forming range of said image carrier and said image carrier.

24. The apparatus as claimed in claim 22, further comprising a cleaning member having a length great enough to contact at least both of said gap forming members in the axial direction and configured to clean said charge roller and said gap forming members.

25. The apparatus as claimed in claim 22, wherein at least said charging device and said image carrier are constructed into a single unit removaly mounted to a body of said apparatus.

26. A charging device comprising:

a charge roller formed with concave stepped portions in at opposite end portions thereof; and

annular regulating members each being fitted in a particular one of said stepped portions;

wherein said regulating members at the opposite ends of said charge roller are not coincident in phase with each other.

27. The charging device as claimed in claim 26, wherein said regulating members at the opposite end portions of said charge roller are shifted in phase by 180° from each other.

28. The charging device as claimed in claim 26, wherein said charge roller is formed of a resin containing an ion-conductive substance.

29. The charging device as claimed in claim 26,

wherein said regulating members are formed of a thermally shrinkable resin lower in hardness than said charge roller.

30. A charging device comprising:

a charge roller formed with concave stepped portions in at opposite end portions thereof; and

annular regulating members each being fitted in a particular one of said stepped portions;

wherein a plurality of annular regulating members are fitted on each of the opposite end portions of said charge roller and shifted in phase from each other by 180°.

31. The charging device as claimed in claim 30, wherein said regulating members, adjoining each other at each opposite end portion, are shifted in phase by 180° from each other.

32. The charging device as claimed in claim 31, wherein one of said regulating members at one end portion and one of said regulating members at the other end portion are coincident in phase with each other.

33. The charging device as claimed in claim 30, wherein said charge roller is formed of a resin containing an ion-conductive substance.

34. The charging device as claimed in claim 30, wherein said regulating members are formed of a thermally shrinkable resin lower in hardness than said charge

roller.

35. An image forming apparatus comprising:

an image carrier; and

a charging device configured to charge said image carrier;

said charging device comprising:

a charge roller formed with concave stepped portions in at opposite end portions thereof; and

annular regulating members each being fitted in a particular one of said stepped portions;

wherein said regulating members at the opposite ends of said charge roller are not coincident in phase with each other, and

said regulating members contact said image carrier while said charge roller does not contact said image carrier.

36. The apparatus as claimed in claim 35, wherein said image carrier comprises an organic photoconductor on which a protection layer, containing a filler, is formed.

37. The apparatus as claimed in claim 35, wherein at least said charging device and said image carrier are constructed into a single unit removaly mounted to a body of said apparatus.

38. An image forming apparatus comprising:

an image carrier; and

a charging device configured to charge said image carrier;

said charging device comprising:

a charge roller formed with concave stepped portions in at opposite end portions thereof; and

annular regulating members each being fitted in a particular one of said stepped portions;

wherein a plurality of annular regulating members are fitted on each of the opposite end portions of said charge roller and shifted in phase from each other by 180°, and

said regulating members contact said image carrier while said charge roller does not contact said image carrier.

39. The apparatus as claimed in claim 38, wherein said image carrier comprises an organic photoconductor on which a protection layer, containing a filler, is formed.

40. The apparatus as claimed in claim 38, wherein at least said charging device and said image carrier are constructed into a single unit removaly mounted to a body of said apparatus.

41. In a roller comprising annular members fitted on opposite end portions thereof, said annular members each has a thickness deviation in a circumferential direction in which a thickness peak and a thinness peak

each appear at least once, and said annular members are positioned such that the thickness peak of one annular member and the thinness peak of the other annular member exist at a same position in the circumferential direction of said roller.

42. The roller as claimed in claim 41, wherein said annular members at the opposite end portions or at least one and another of a plurality of annular members positioned at each end portion are positioned such that the thickness peaks are shifted by 90°.

43. The roller as claimed in claim 41, wherein a mark indicative of a particular position of the thickness deviation is positioned on each of said annular members.

44. In a roller comprising annular members fitted on opposite end portions thereof, a plurality of annular members, each having a thickness deviation in a circumferential direction in which a thickness peak and a thinness peak each appear at least one, are fitted on each of opposite end portions of said roller, and said annular members at each end portion are positioned such that the thickness peak of at least one annular member and the thinness peak of the other annular member exist at a same position in the circumferential direction of said roller.

45. The roller as claimed in claim 44, wherein said

annular members at the opposite end portions or at least one and another of a plurality of annular members positioned at each end portion are positioned such that the thickness peaks are shifted by 90°.

46. The roller as claimed in claim 44, wherein a mark indicative of a particular position of the thickness deviation is positioned on each of said annular members.

47. An image forming apparatus comprising:

an image carrier configured to carry a latent image thereon;

a charge roller configured to charge said image carrier;

latent image forming means for forming the latent image on said image carrier charged by said charged by said charge roller; and

developing means for developing the latent image;

wherein said charge roller comprises annular members fitted on opposite end portions thereof,

said annular members each has a thickness deviation in a circumferential direction in which a thickness peak and a thinness peak each appear at least once, and

said annular members are positioned such that the thickness peak of one annular member and the thinness peak of the other annular member exist at a same position in the circumferential direction of said roller.

48. An image forming apparatus comprising:

an image carrier configured to carry a latent image thereon;

a charge roller configured to charge said image carrier;

latent image forming means for forming the latent image on said image carrier charged by said charged by said charge roller; and

developing means for developing the latent image;

wherein said charge roller comprises annular members fitted on opposite end portions thereof,

a plurality of annular members, each having a thickness deviation in a circumferential direction in which a thickness peak and a thinness peak each appear at least one, are fitted on each of opposite end portions of said roller, and

said annular members at each end portion are positioned such that the thickness peak of at least one annular member and the thinness peak of the other annular member exist at a same position in the circumferential direction of said roller.

49. A method of producing a roller, comprising:

a dividing step of dividing a tubular member in an axial direction into a plurality of annular members; and

a fitting step of fitting said annular members on

opposite end portions of a roller member to thereby cause a circumferential surface of said roller to protrude at said opposite end portions;

wherein before said dividing step a mark indicative of either one of any desired position of said tubular member in a circumferential direction and a particular position of a thickness deviation of said tubular member in said circumferential direction is provided on a surface of said tubular member over a preselected length in a lengthwise direction of said tubular member.